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Two new species and a new record of Dolicaonina from Ecuador (Coleoptera: Staphylinidae: Paederinae)

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Abstract: *Gnathymenus rossii* nov.sp. (Ecuador: Cotopaxi) and *Stenopholea caeca* nov.sp. (Ecuador: Pichincha), an anophthalmous species, are described and illustrated. *Gnathymenus tungus* HERMAN 1981 is reported from Cotopaxi province. The type localities of the new species are mapped.

Key words: Coleoptera, Staphylinidae, Paederinae, Dolicaonina, *Gnathymenus*, *Stenolophea*, Neotropical region, Ecuador, taxonomy, new species, new record.

Introduction

According to a comprehensive revision by HERMAN (1981), the paederine subtribe Dolicaonina is represented in the New World by 78 species in three genera: *Acaratopus* HERMAN 1981 (one species), *Gnathymenus* SOLIER 1849 (67 species), and *Stenopholea* HERMAN 1969 (ten species). No additional species have been described since. Seven species, six of *Gnathymenus* and one of *Stenopholea*, had been recorded from Ecuador.

In material of Staphylinidae from Ecuador made available to me as a gift by Volker Brachat (Geretsried) and Walter Rossi (L'Aquila) four species of *Gnathymenus* and one of *Stenopholea* were found. Two of the *Gnathymenus* species are represented only by single females, thus rendering a reliable identification impossible, and one was identified as *G. tungus*. The remaining two species were undescribed.

Material and methods

The material treated in this study is deposited in the author´s private collection.

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs. The map was created using MapCreator 2.0 (primap) software.

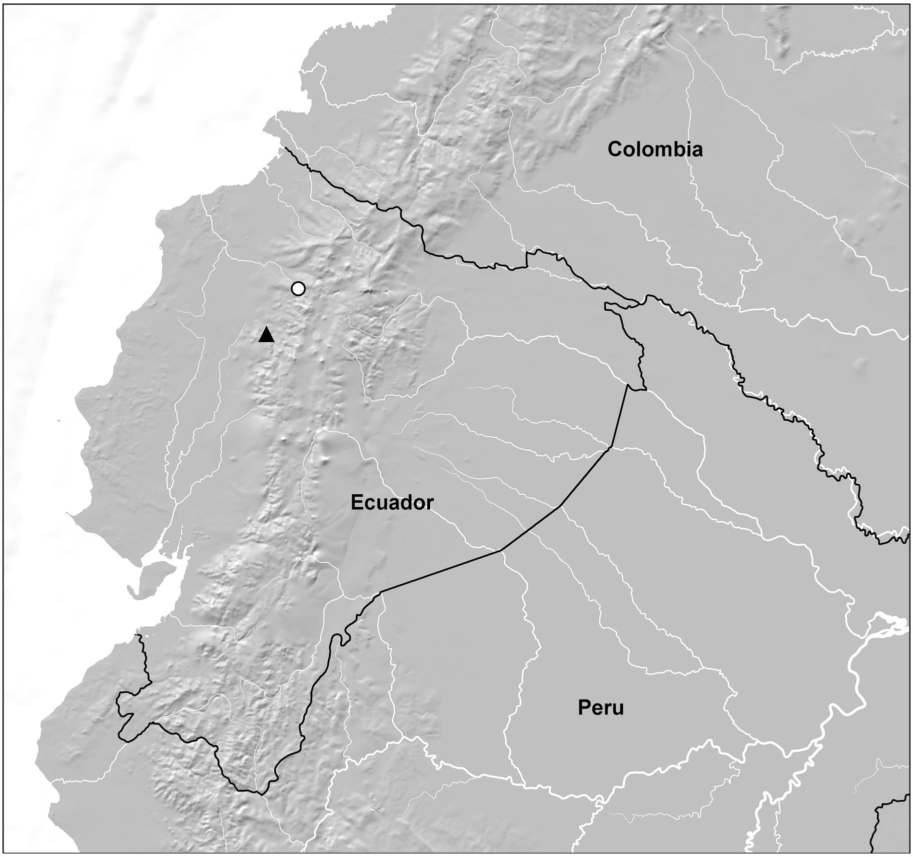
Body length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra (at the suture), and the length of the aedeagus from whatever structure forms the apex to the base of the aedeagal capsule. The parameral side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Species descriptions and new record

Gnathymenus tungus HERMAN 1981

Material examined: Ecuador: 8♂♂, 4♀♀, Cotopaxi, Bosque Integral Otonga, 10.VII.2006, leg. Rossi (cAss).

Comment: This species was previously known only from two localities in Pichincha province (HERMAN 1981). The locality where the above specimens were collected is identical to the type locality of *G. rossii* nov.sp. (see Map 1).



Map 1: Type localities of *Gnathymenus rossii* nov.sp. (triangle) and *Stenolophea caeca* nov.sp. (circle).

Gnathymenus rossii nov.sp. (Figs 1-8, Map 1)

Type material: Holotype ♂: "ECUADOR - Cotopaxi, Bosque Integral Otonga, 10.VII.2006, leg. W. Rossi / Holotypus ♂ *Gnathymenus rossii* sp. n. det. V. Assing 2013" (cAss). Paratypes: 1♂, 5♀♀: same data as holotype (cAss); 1♀: "ECUADOR - Cotopaxi, Canton Sigchos, Las Pampas, Otonga Natural Reserve, 25.-28.VII.2005, leg. W. Rossi" (cAss).

Etymology: This species is dedicated to Walter Rossi from L'Aquila, specialist of Laboulbeniales, who collected most of the material treated in the present paper.

Description: Body length 5.9-6.5 mm; length of forebody 2.8-3.1 mm. Habitus as in Fig. 1. Coloration: head and pronotum reddish; elytra dark-brown to black, sometimes with bluish hue; abdomen distinctly bicoloured, blackish with bright reddish apex (posterior third of segment VII; segments VIII-X); legs, antennae, and mouthparts reddish.

Head (Fig. 2) transverse, 1.15-1.23 times as broad as long, widest across eyes, weakly tapering behind eyes; punctation rather coarse and sparse; interstices distinctly broader than diameter of punctures, without microsculpture. Eyes rather large and convex, nearly as long as postocular region in dorsal view.

Pronotum (Fig. 2) approximately 1.1 times as long as broad and 0.95 times as broad as head, broadest near anterior angles, and distinctly tapering posteriad; punctation similar to that of head; midline impunctate; interstices without microsculpture.

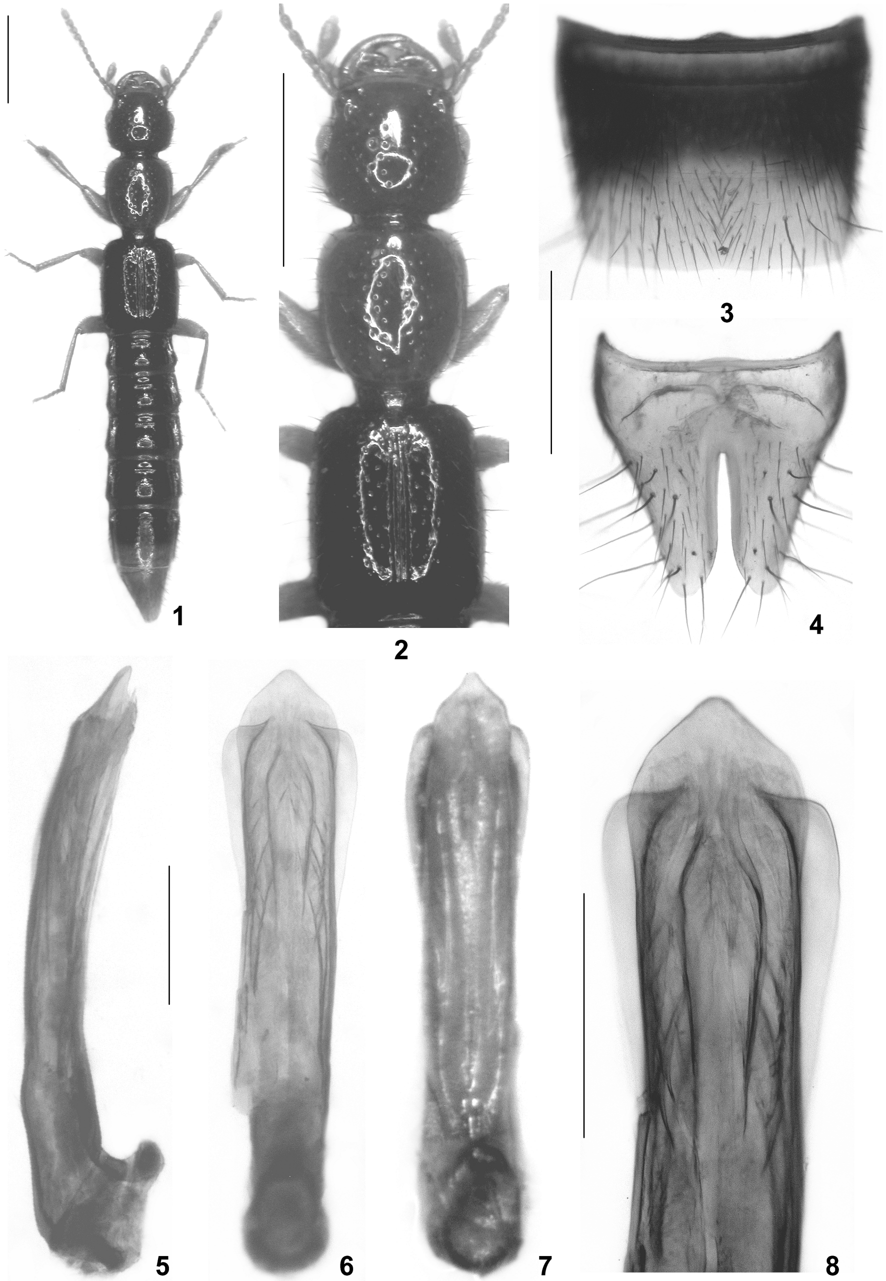
Elytra (Fig. 2) long, slightly longer than pronotum, and with marked humeral angles; punctation similar to that of head and pronotum; interstices without microsculpture. Hind wings fully developed. Metatarsomere I slightly longer than II.

Abdomen distinctly narrower than elytra; segments III-VI with distinct paratergites; punctation rather sparse, moderately fine on anterior and very fine on posterior tergites; interstices with shallow microsculpture; posterior margin of tergite VII with palisade fringe.

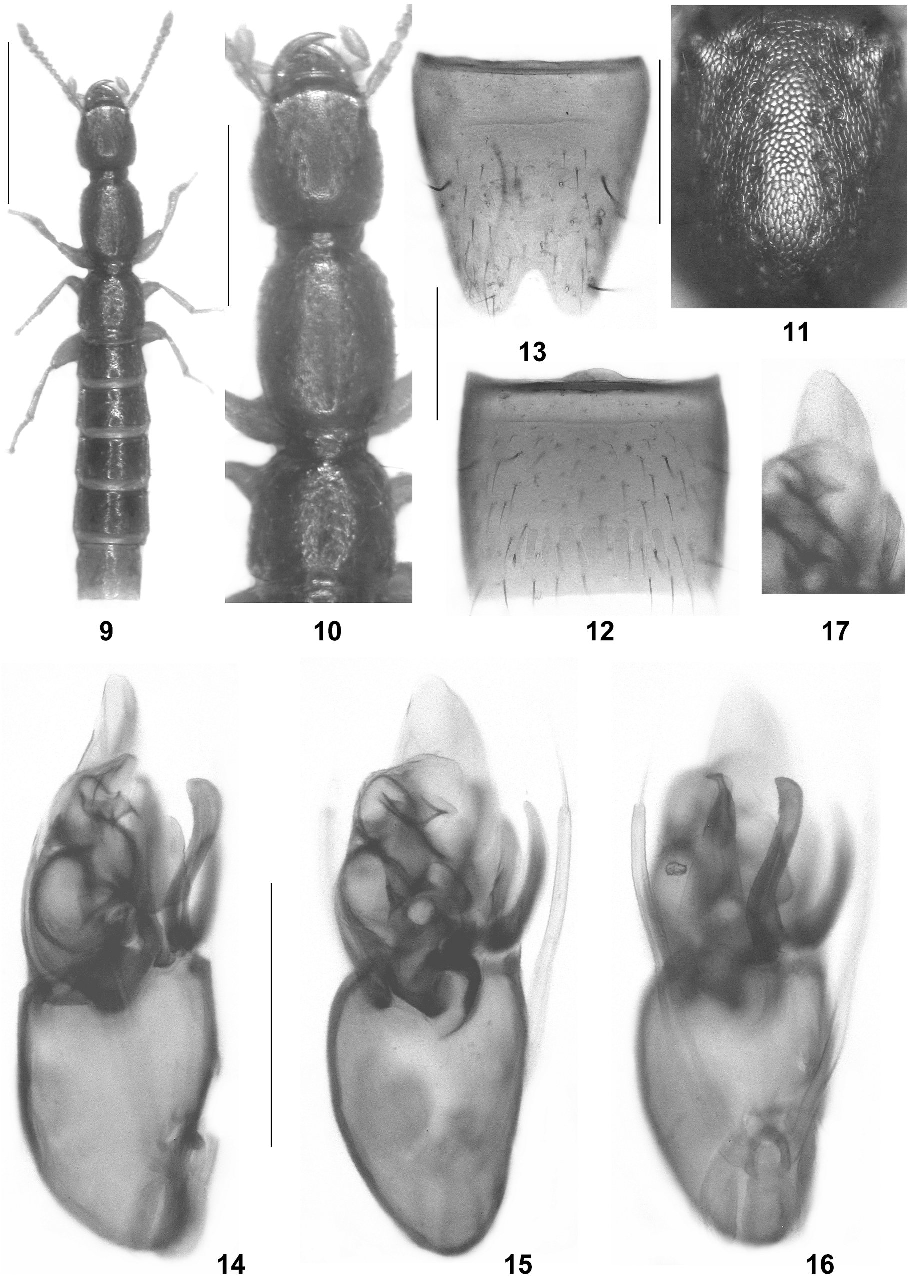
♂: sternites III-VI unmodified; sternite VII (Fig. 3) moderately transverse and with truncate posterior margin, pubescence in the middle convergent; sternite VIII (Fig. 4) weakly transverse, posterior excision deep and narrow, its depth approximately two-thirds the length of sternite; aedeagus (Figs 5-8) approximately 0.9 mm long, slender, and symmetric; parameres apparently completely fused with median lobe.

Comparative notes: The new species is distinguished from all its congeners by the different morphology of the aedeagus. Using to key to females (based on external characters) in HERMAN (1981), *G. rossii* would key out at couplet 85, together with *G. fiscus* HERMAN 1981 from Venezuela and *G. angulus* HERMAN 1981 from Ecuador. Apart from the different male primary and secondary sexual characters, *G. rossii* is distinguished from both species by much larger size alone (*G. fiscus*: 3.5-4.1 mm; *G. angulus*: 3.5 mm). For illustrations of the male sexual characters of *G. fiscus* and *G. angulus* see HERMAN (1981).

Distribution: The species was discovered in the Otonga Nature Reserve in Cotopaxi province, Ecuador (Map 1), at an altitude between 1750 and 1950 m. The locality is near 00°25'S, 79°00'W (ROSSI pers. comm.).



Figs 1-8: *Gnathymenus rossii* nov.sp.: (**1**) habitus; (**2**) forebody; (**3**) male sternite VII; (**4**) male sternite VIII; (**5**) aedeagus in lateral view; (**6-7**) aedeagus in ventral view; (**8**) apical portion of aedeagus in ventral view. Scale bars: 1-2: 1.0 mm; 3-4: 0.5 mm; 5-8: 0.2 mm.



Figs 9-17: *Stenopholea caeca* nov.sp.: (**9**) habitus; (**10)** forebody; (**11**) median dorsal portion of head; (**12**) male sternite VII; (**13**) male sternite VIII; (**14**) aedeagus in lateral view; (**15-16**) aedeagus in ventral view; (**17**) apical portion of dorsal plate in ventral view. Scale bars: 9: 1.0 mm; 10: 0.5 mm; 11-17: 0.2 mm.

***Stenopholea caeca* nov.sp.** (Figs 11-17, Map 1)

Type material: Holotype ♂: "ECUADOR - Pichincha, 0°01.59'N, 78°41.42'W, 2300 m, 1.-20.IX.2012, leg. Dietl & Beck / Holotypus ♂ *Stenopholea caeca* sp.n. det. V. Assing 2013" (cAss).

Etymology: The specific epithet (Latin, adjective: blind) refers to the almost completely reduced eyes.

Description: Small species; body length 3.5 mm; length of forebody 1.5 mm. Habitus as in Fig. 9. Coloration: body reddish; legs and antennae reddish-yellow.

Head (Figs 9-10) oblong, 1.15 times as long as broad; punctation rather coarse and sparse; middle of dorsal surface without punctation; interstices with pronounced microreticulation and nearly matt. Eyes reduced to minute rudiments without pigmentation and without ommatidia. Antenna short, approximately 0.6 mm long, and distinctly incrassate apicad; antennomere III approximately as long as broad; IV weakly transverse; V-IX of increasing width and increasingly transverse; IX approximately twice as broad as long; X longer and less transverse than IX; XI approximately as long as combined length of IX and X.

Pronotum (Fig. 10) slender, 1.3 times as long as broad and 1.05 times as broad as head, broadest behind middle; punctation and microsculpture similar to those of head; midline impunctate.

Elytra (Fig. 10) short, approximately 0.5 times as long as pronotum; punctation fine and rather sparse; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen somewhat broader than elytra; segments III-VI with distinct paratergites; punctation fine and sparse; interstices with shallow microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternites III-VI unmodified; sternite VII (Fig. 12) moderately transverse, pubescence unmodified; sternite VIII (Fig. 13) approximately as long as broad; posterior excision not very deep and nearly V-shaped, pubescence unmodified; aedeagus (Figs 14-17) 0.44 mm long and distinctly asymmetric; ventral process completely separated into two slender processes in asymmetric position; dorsal plate long and distinctly exceeding beyond other apical structures; parameres slender and moderately long, connected to median lobe only at base.

Comparative notes: The only geographically close congener is *S. papola* HERMAN 1981 from Napo province in Ecuador. It is distinguished from the new species by the granulate ground sculpturing of the head and pronotum, the less reduced eyes, the deeper and much narrower posterior excision of the male sternite VIII, and by the completely different shape of the aedeagus. For illustrations of *S. papola* see HERMAN (1981).

Distribution: The type locality is situated in Pichincha province, Ecuador (Map 1), at an altitude of 2300 m. Additional data are not available.

Acknowledgements

I am indebted to Walter Rossi (L'Aquila) and Volker Brachat (Geretsried) for the generous gift of Staphylinidae from Ecuador. Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Gnathymenus rossii nov.sp. (Ecuador: Cotopaxi) und *Stenopholea caeca* nov.sp. (Ecuador: Pichincha), eine anophthalme Art, werden beschrieben und abgebildet. *Gnathymenus tungus* HERMAN 1981 wird aus der Provinz Cotopaxi nachgewiesen. Die Typuslokalitäten der neuen Arten werden anhand einer Karte illustriert.

References

HERMAN L.H. (1981): Revision of the subtribe Dolicaonina of the New World, with discussions of phylogeny and the Old World genera (Staphylinidae, Paederinae). — Bulletin of the American Museum of Natural History **167**, Article 6: 327-520.

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